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MONTHLY BULLETIN.

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VITAL STATISTICS FOR SEPTEMBER.

Summary.—A total of 1,910 living births were reported for September from forty-two counties, including fifteen freeholders' charter cities. Among these cities San Francisco led with 590 births for the month, followed by Los Angeles with 306 and Oakland with 126. The cities for which the Local Registrars reported the next highest numbers of births registered in September were, in descending order: Sacramento, 41; San José, 39; Berkeley, 36; Fresno, 32; Pasadena, 28; San Diego, 21; and Stockton, 21. The other cities from which birth certificates have been received in accordance with the registration law now in effect are as follows, arranged alphabetically: Grass Valley, Napa, San Bernardino, Santa Barbara, Santa Cruz, Vallejo, and Watsonville.

Altogether 1,366 marriages were reported for September from forty counties. Since the present law took effect, an aggregate of 3,604 marriages have been registered in forty-six counties altogether. The totals by months were as follows: June (including part of May), 267; July, 904; August, 1,067; and September, 1,366. Of the 3,604 marriages registered in the entire State, as many as 1,186, or about one third (32.9 per cent) of all, were in the metropolis, San Francisco. At least 100 marriages were also registered in the three or four months covered in each of the following six counties: Alameda, 390; Santa Clara, 274; Sacramento, 270; San Joaquin, 144; San Bernardino, 133; and Fresno, 106. Next in numerical order for total marriages registered in approximately the July-September quarter are the following seven counties: San Diego, 99; Orange, 87; Santa Barbara, 76; Riverside, 66; Santa Cruz, 66; San Mateo, 63; and Mendocino, 58. Between 20 and 50 marriages

have been registered in each of the following twelve counties, arranged alphabetically: Calaveras, Kern, Monterey, Napa, Nevada, San Luis Obispo, Shasta, Solano, Stanislaus, Tulare, Ventura, and Yolo. In the period covered marriages have also been registered in the following twenty counties: Alpine, Butte, Del Norte, El Dorado, Glenn, Inyo, Kings, Lake, Lassen, Mariposa, Merced, Modoc, Plumas, San Benito, Sierra, Siskiyou, Sutter, Tehama, Trinity, and Yuba. Though the eleven counties from which the County Registrars have not yet forwarded certificates of marriages include one populous county, none of the others had over 40,000 inhabitants in 1900, and, in fact, all except three were of less than 20,000 population at the last Federal census.

A total of 1,811 deaths, exclusive of stillbirths not tabulated, were reported for September from forty-eight of the fifty-seven counties in the State, including seventy-four cities and incorporated towns. Reports that no deaths occurred in the month were received from three County and fourteen City or Town Registrars. The principal causes of death were general diseases (especially other than epidemic diseases), diseases of the nervous system, of the circulatory system, of the digestive system, and violence. About one eighth of the deaths were due to tuberculosis, and about one twelfth to heart disease. The next most important specific causes of death in September were cancer, pneumonia, Bright's disease, apoplexy, and diarrhea and enteritis.

Causes of Death.—The following table gives the number of deaths from the diseases included under each of the main headings of the International classification for California in September and August respectively. For convenience in comparison, the proportion of deaths from each class per 10,000 from all causes is likewise shown for both months:

Class.	Number.		Proportion per 10,000.	
	Sept.	August.	Sept.	August.
ALL CAUSES	1,811	1,844	10,000	10,000
General Diseases	527	560	2,910	3,037
Epidemic diseases	96	96	530	521
Other general diseases	431	464	2,380	2,516
Nervous System	229	213	1,264	1,155
Circulatory System	210	223	1,160	1,209
Respiratory System	159	129	878	700
Digestive System	192	182	1,060	987
Genito-urinary System	120	107	662	580
Childbirth	13	10	72	54
Skin Diseases	2	10	11	54
Locomotor System	2	3	11	16
Malformations	5	11	28	60
Early Infancy	84	74	464	401
Old Age	49	77	270	418
Violence	162	194	895	1,052
Ill-defined Diseases	57	51	315	277

About one fourth of the deaths each month were caused by general diseases other than epidemic diseases, the class which includes tuberculosis and cancer. In August there were relatively more deaths from diseases of the circulatory system than from those of the nervous system, but in September the balance had shifted so that then the proportion of deaths from diseases of the nervous system was somewhat

greater than that from diseases of the circulatory system. Further, while in August more deaths were caused by violence than by diseases of the digestive system, in September there were more deaths from diseases of the digestive system than from the various forms of violence. In both months the next most important causes of death were diseases of the respiratory system and of the genito-urinary system.

The following table shows for September the number of deaths from the leading specific diseases, as well as the proportion per 10,000 from all causes:

Disease.	Number.	Proportion.
ALL CAUSES	1,811	10,000
Tuberculosis	235	1,298
Heart disease	159	878
Cancer	104	574
Pneumonia	97	537
Bright's disease	93	513
Apoplexy	88	486
Diarrhea and enteritis	85	469
Old age	49	270
Congenital debility	46	254
Meningitis	39	215
Typhoid fever	38	210
All others	778	4,296

About one death in eight was caused by tuberculosis and one in twelve by heart disease. In round numbers about one death in twenty was due to cancer, pneumonia, Bright's disease, apoplexy, or diarrhea and enteritis, and, roughly speaking, about one in forty was due to old age, congenital debility, meningitis, or typhoid fever.

PUBLIC HEALTH ASSOCIATION.

The California Public Health Association will hold its fifth session at the Board of Health room, City Hall, San Francisco, beginning at 10 A. M. October 28th. The following is the program:

10:00 A. M.—Greeting by the President, Dr. E. von Adelung, Oakland.

10:15 A. M.—“Sanitation of Stanford,” Dr. W. F. Snow, Stanford University.
Discussion to be opened by Dr. R. L. Wilbur.

11:00 A. M.—“Contamination of Water Supplies,” Dr. N. K. Foster, Sacramento.
Discussion to be opened by Dr. F. G. Canney.

11:45 A. M.—Questions and general discussion on any desired subject.

12:00 M. —Noon recess.

1:30 P. M.—Questions continued.

2:00 P. M.—“Disinfection,” Dr. J. A. Cobb, Passed Assistant Surgeon U. S. Public Health and Marine Hospital Service, Los Angeles.
Discussion to be opened by Dr. W. C. Hassler.

2:45 P. M.—“Quarantine in Typhoid,” Dr. Woods Hutchinson, Arrowhead Sanatorium.
Discussion to be opened by Dr. Charles C. Browning.

3:30 P. M.—“Control of Contagious and Infectious Diseases of Aliens arriving in San Francisco,” Dr. H. S. Cumming, Passed Assistant Surgeon U. S. Public Health and Marine Hospital Service, San Francisco.
Discussion to be opened by Dr. Trotter, U. S. Public Health and Marine Hospital Service.

4:15 P. M.—“Undrawn Fish and Poultry,” Dr. F. G. Fay, Sacramento.
Discussion to be opened by Prof. A. R. Ward.

Discussion will follow each paper; speakers limited to five minutes.
Evening session at pleasure of Association.

Every person interested in sanitation is cordially invited.

THE SALE OF POISONOUS DRUGS.

The death reports for September show that eleven deaths in the State resulted from acute opium or morphine poisoning. In most of the cases the drug was obtained at drug stores where no record was kept of the sale, which is a violation of the law. Many, in a state of despondency, get and take the drug, and their lives are lost, when, if the law was enforced, they would be saved. Perhaps more pitiable than the deaths resulting from acute opium poisoning are the lives of the morphine fiends, who are too often made such by the criminal ease with which they can get the drug.

At a meeting of the State Board of Health, held in Sacramento, October 10th, the following resolution was unanimously passed:

Resolved, That the sale of morphine and other forms of opium without the proper observance of the law regulating the sale of these drugs is the cause of many deaths, and the Secretary of the Board is instructed to notify all health officers, through the Monthly Bulletin, that it is their duty to see that this law is enforced.

It is the duty of every health officer in the State to enforce all laws pertaining to health matters, the sale of poisonous drugs as well as others, and they should cause the prosecution, to the fullest extent, of any druggist violating it.

DIPHTHERIA.

Diphtheria is eminently a contagious disease, each case coming from some preceding case, and from nothing else. The infection may enter the body in a great variety of ways. It may pass directly from mouth to mouth, or indirectly by objects which have become contaminated. Dried sputa, when raised as dust, may be a prolific source of infection, as would the fine spray from sneezing or coughing. Food may also become infected, especially milk or cream. It follows that if proper care be exercised with each case diphtheria could soon be banished from our midst. It is perhaps too much to be hoped that this will ever be accomplished, but to have the disease epidemic in a locality casts a reflection on the health authorities and causes the thought to arise that they are not doing their full duty. This is not always just, for often the people are at fault, neglecting to report light cases and disobeying the instructions of the health officer. Indeed, this is the most frequent cause of epidemics, and a light case of the disease is more dangerous to a community than a severe one. The child that is severely sick will be kept under close watch, confined to its room, all the discharges destroyed, and everything in contact with the patient disinfected. With the mild case the reverse is true. The chances are it continues in school, or if taken out plays with the neighboring children. The throat being irritated, the child, whenever the occasion requires, expectorates the secretions filled as they are with the disease germs, often using little care where the expectorated matter falls. Its hands and playthings become contaminated and the disease is readily given to its playmates. This means of spreading the disease can not be too strongly impressed upon the people, and great care should be exercised not to allow a case of sore throat to go until sure it is not diphtheria. Every case should be looked upon as suspicious, and if diphtheria is known to exist in the vicinity the patient should be

isolated until all doubts are removed. While personal contact is a great source of spread, place infection and that of books, playthings, and clothing must not be neglected.

There is no doubt that the schools are one great means of spreading the disease, and to them the health officer should give his earnest attention. There should be a daily examination of each school by a physician, when the disease prevails. This may seem expensive, but it would save many lives, and frequently physicians can be found who will volunteer to do this work, or if this is not possible the principal should make the examination. Each pupil found with an inflamed throat, fever, or feeling ill in any way, should be sent home and isolated until such time as it can be determined what is the nature of the trouble. It is seldom necessary to close the schools, and it is an open question if more harm may not result with the children on the streets, where many of them will be, than in school. If the school is properly cared for it is best not to close it, but more attention must be given to disinfecting the school-room and to removing all sources of communication from the affected who may possibly pass the daily examination. *No common drinking-cup should be allowed.* The custom of collecting the pencils and redistributing them should not be allowed, as children almost invariably moisten the pencils in the mouth, thus making it a means of transmitting disease germs to the next child who has the same unsanitary habit. It must always be remembered that nothing short of a bacteriological examination can positively say that the diphtheria germ is not present in the secretions of a throat, hence the absolute necessity of avoiding all means of communication such as kissing, common use of pencils, drinking-cups, spoons, towels, or handkerchiefs.

More attention must also be given to disinfection of the school-room. Always, after a case has developed in a school, it should be thoroughly disinfected, special attention being given to any books, papers, or pencils used by the child. Formaldehyde is most generally used at present, although sulphur for school-houses may be used to advantage, as it kills all insect life, and as insects are known to spread some diseases, this is a valuable point. Its being destructive to metals and fabrics lessens its value for the private house. In using sulphur it is necessary that the atmosphere be moist, so the iron vessel in which the sulphur is burned should be set in water, which will be evaporated by the heat and give the required moisture. Five pounds must be used for every 1,000 cubic feet of space. In using formaldehyde it is necessary to get the largest quantity of gas in the shortest possible time. This is perhaps best accomplished by means of the permanganate of potash method, six and a half ounces of the fine crystals being put in a twelve-quart iron pail and sixteen ounces of the 40 per cent formalin quickly poured upon it. This amount of formalin should always be used for 1,000 cubic feet of space, no matter what method is employed. Whatever method or means of disinfection is used, the exposure should be as long as possible. The rooms must be *sealed*, by pasting strips of paper over all cracks, closing registers, ventilators, and fireplaces. All drawers and desks should be opened, and if carpets are on the floor they should be raised so that the gas can readily get under them.

The attention given the sick-room is of vast importance, for there are many ways for the disease germ to escape. First, the patient should be isolated as far from the family as possible, and in a room with only

the furniture absolutely needed. Carpets and draperies are unnecessary, and should be discarded. After the patient enters it nothing should be removed from the room until it has been disinfected. The attendants should be limited to the physician and nurse, and all visitors should be denied admission. All remains of food should be burned, as should rags or papers used to receive the expectorated discharges. It is not uncommon to see in the sick-room the bottle which contains the milk or cream as it came from the dairy. This should never be allowed, for it is liable to become infected and spread the disease.

The germs of diphtheria are readily destroyed by heat, boiling water killing them almost instantly, hence it is easy to disinfect at the bedside, where it should always be done. All towels, clothing, tableware, and in fact everything that moisture does not injure, should be immersed in boiling water before removing them from the room. Bed clothing that can not be boiled must be exposed during the general disinfecting. Books will require special care, and if used by the patient had better be burned; if not, they must be spread out when the room is disinfected, for if left closed no good will result.

Domestic animals must be excluded from the sick-room, for it is possible for them to carry the disease. Flies also must be remembered, for if allowed in the room they can easily, and almost surely will get the secretions from the patient on their feet and legs and fly to some other place where they can wash them off in milk or wipe them off on other food.

To the lasting shame of a few physicians, they do not report their cases. Their usual plea is, "Oh, they were light cases." The doctor who, for personal, political, or financial reasons, neglects to report cases of diphtheria is morally, and should be criminally, responsible for the sickness or death of any one contracting the disease from the unreported case. It is no friendship to the family to neglect this duty to the public, for the disease will linger in the house unless thoroughly disinfected, as is almost never done unless by health authorities. The physician well knows that from light cases there is a liability of malignant ones arising, and his neglect to report is a violation of a sacred trust.

In all cases the patient should be isolated continuously until two examinations of the throat secretions, made twenty-four hours apart, show the absence of the diphtheria germ. Most cities have a laboratory where this is done, and the State Hygienic Laboratory for this purpose, free to all health officers of the State, is maintained at Berkeley.

In case of death public funerals should not be allowed.

The disinfection of the room *must* be thorough. Too often dependence is put upon small sulphur candles or a mere sprinkling of formalin, and the cracks are left open. The same care as to sealing the room must be exercised, and the same amount of disinfectants used, as described for school-houses.

Sunlight and air are among our best disinfectants, and must always be used to the fullest extent. Get all you can of both in the sick-room. While they will not kill the germ like formaldehyde, it does not thrive in them. They invigorate the patient and attendants and add greatly to the resisting power of the body, which is our main defense against disease.

Antitoxin should be freely used upon the first appearance of the disease,

no matter if it is mild. Its use is free from danger, and good authorities claim that no child ever died of diphtheria where 3,000 units were used during the first twenty-four hours, and the dose repeated as needed. Larger doses than this are often necessary when the disease is more advanced, and in all cases the condition of the patient should be the criterion from which to judge. If no improvement is seen in twelve hours the dose should be repeated, and continued each day until the exudate has disappeared.

HONEST LABELING OF FOOD MATERIALS.

In view of some of the criticisims which have appeared in the press of the State, with reference to our analyses of "evaporated creams," it seems advisable to say a few words regarding the object of the work.

It is well known, as stated by the writer¹, that "there are, in the main, two methods of adulteration employed: the one harmful and sometimes poisonous to the human system, and the other the deceptive and fraudulent, but not generally injurious to the health of the consumer.

"In those states where enforcement of pure-food laws is carried on, most of the work is devoted to the detection of the harmful and injurious preservatives, while the second method, just mentioned, has been investigated but to a very limited extent, and there are even certain frauds which do not come within the pale of laws now exercised.

"The first method referred to above does not require any extended discussion, because all will agree that no food should be manufactured or sold which contains harmful or injurious ingredients. It would seem that, in the light of our present knowledge, it would be far safer to prohibit the use of preservatives in foods or food materials. If, later on, science can show, as some claim it will, that the small addition of certain preservatives is harmless, then the laws can be modified accordingly. Still it must not be forgotten that the results of experiments made on healthy subjects can not be expected to be applied to the invalid and convalescent or dyspeptic, for whom many of the foods now containing preservatives are prescribed or recommended.

"With the second method, the deceptive and fraudulent, etc., the case is very different. No one should be prohibited from manufacturing or selling any admixture of foods or food materials, provided the package is *honestly labeled*, thus insuring the sale of the materials *for just what they are*.

"Several forms of mislabeling can be enumerated, among which the following are the most conspicuous: (1) False statements concerning the nature of the contents of packages of foods or food materials; (2) False statements regarding the nutritive value of the different manufactured and prepared foods; (3) False statements or inferences relating to the weight of foods or food materials in any package.

"With reference to No. 1, it may be said that the fraud, in most cases, is of a pecuniary nature. Cheap materials are added to more expensive ones, thus bringing cheap and inferior products into competition with those from the hands of the honest manufacturer. While the addition of mustard or cottonseed oil to a salad will not have any appreciable effect on the health of the consumer, still there is the pecuniary fraud

¹ California State Medical Journal, June, 1904.

which should be prevented. At the same time no one should be denied the right to buy the cheap oils. But those who wish to purchase pure olive oil should not have to remain in doubt as to its purity and quality, as at present they so often have to do. The enforcement of proper labeling would obviate all of these difficulties. Again, no prohibitory restrictions should be placed upon the manufacturer who wishes to make a jelly consisting of a mixture of apple and currant, or a corn-starch and fruit jelly, or a butterine made up of butter and oleomargarine, etc., nor, in fact, any compound from the admixture of two or more food materials each of which may possess different nutritive and pecuniary values, provided the proper statements are *plainly in evidence* on the label.

"In many cases the nature of the main contents of the package is plainly printed, but the type used for the name or names of the adulterants is so small, and often so concealed in the "foliage" of the label, that unless one is very careful he is led to believe that the contents consist entirely of the material indicated by the large type. This is particularly true of honey. There are cases where the words 'Pure Honey' have a prominent position on the label, but only after careful search will one find the statement, '20 per cent honey and 80 per cent glucose.' Thus the manufacturer has complied with the law in name, but, as far as the consumer is concerned, has decidedly evaded it in spirit. There should be no objection against the manufacture of a butter containing 20 per cent of water, if such be stated on the wrapper and the butter be subjected to a discount; because the purchaser should not be obliged to pay for 8 to 10 per cent extra of water at the price of butter fat.

"Prominent among the deceptions practiced under the second form above mentioned may be noted several proprietary foods, infant foods, cereal breakfast foods, coffee substitutes, and 'evaporated creams.' The 'evaporated creams' are excellent food, to which no objection can be raised, but they should be *honestly labeled for just what they are*. These materials are seldom, if ever, admixed with any poisonous or harmful adulterants."

M. E. JAFFA.

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